



Indiana University Scintillator R&D for NOvA

Stuart Mufson

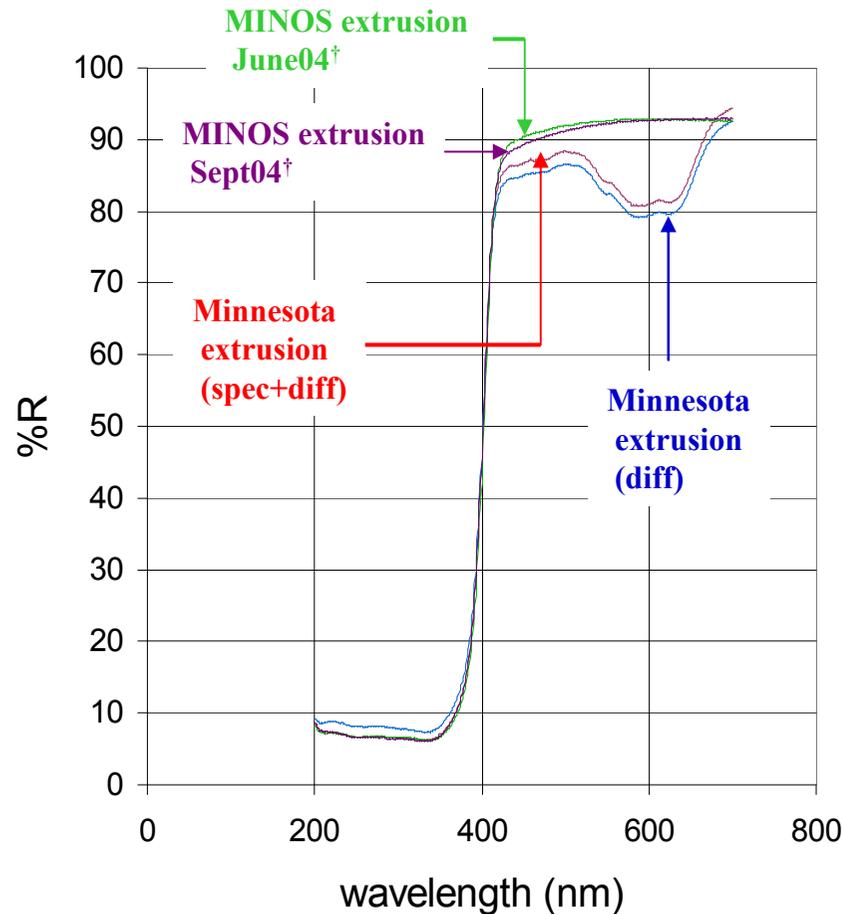
Bower, Gebhard, Karty, Messier, Musser, Urheim, Waldron

Indiana University

October 2, 2004



Reflectivity of Minnesota Extrusions



- **Reflectivity measurements with IU Carey spectrophotometer**
 1. **Measurements of MINOS liquid scintillator prototype extrusions (used in our cosmic ray test set-up)**
 - i. June 2004 (specular + diffuse)
 - ii. September 2004 (specular + diffuse)
 2. **Measurements of Minnesota extrusions**
 - i. specular + diffuse reflection
 - ii. diffuse reflection only
- **Reflectivity of Minnesota extrusions lower by ~4-5% in critical 420-470 nm bandpass, relative to MINOS extrusions**

[†] different samples of same material



Reflectivity of Minnesota Extrusions



- output signal:

$$\propto R^n$$

n = # bounces

output of secondary
wave shifters

